Electrical and Computer Engineering Minors

Electrical Engineering Minor (Non-Teaching)

The ECE Department offers a non-teaching minor in Electrical Engineering that provides interested students with an introductory understanding of electrical circuits, electronics, and properties of signals. Students then choose electives from among a variety of EE topics, such as telecommunications, optics, electrical power, and control systems. This minor requires a minimum of 30 credits in electrical engineering subjects, with 9 of those credits selected from a list of upper division elective courses. This minor complements majors in science or engineering for those seeking a cross-disciplinary academic program.

A CpE major can complete a minor in EE by taking three EE classes (9 cr min) from the specified elective list for the EE minor. This can be done within the 126 credits required for the CpE degree alone, by carefully choosing the professional elective credits.

ELECTRICAL ENGINEERING MINOR
(NON-TEACHING MINOR, 30 credits)

Required courses:

EELE 101—Intro to Electr Fund	3
EELE 201—Circuits I	4
EELE 203—Circuits II	4
EELE 308—Signal and System Analysis	3
EELE 317—Electronics	4
EELE 334—Electromag Theory I	3

Take 9 credits minimum from the following:

EELE 321—Intro to Feedback Control	3
EELE 432—Applied Electromagnetics	3
EELE 355—Electrical Machinery	4
EELE 409—EE Material Science	3
EELE 411—Adv Analog Electronics	3
EELE 414—Intro to VLSI Design	3
EELE 422—Intro Modern Control	3
EELE 445—Telecommunications Sys	4
EELE 447—Mobile Wireless Sys	3
EELE 477—Digital Signal Processing	4
EELE 482—Electro-optical Systems	3
EELE 484—Laser Engineering	3

Students must receive a grade of "C-" or better in all courses used to fulfill the minor.

Computer Engineering Minor (Non-Teaching)

The ECE Department offers a non-teaching minor in Computer Engineering that provides a focus in computer programming, digital logic design, and microprocessor hardware/software. The minor requires a minimum of 30 credits: 23 credits in seven specified CS and EE courses and at least 7 credits (2 or 3 courses) of electives selected from among a specified list of upper-division EE courses. This minor is a useful complement to majors in science or engineering for those seeking a cross-disciplinary academic program.

An EE major can complete a minor in Computer Engineering by taking CSCI 111/127, 132, and 232 (a total of 12 credits) plus two courses (7 cr min) from the specified elective list for the CpE minor. Completing the Computer Engineering minor requires 3 credits of professional electives beyond the minimum credits required for EE majors. Thus, an EE degree with a CpE minor can be completed in 128 credits.

COMPUTER ENGINEERING MINOR
(NON-TEACHING MINOR, 30 credits)

Required courses:

CSCI 111 or CSCI 127—Intro Programming	4
CSCI 112—Program Design with C	3
CSCI 132—Basic Data Structures	4
CSCI 232—Data Structures & Algorithms	4
EELE 261—Intro to Logic Circuits	4
EELE 371—Micr Hrdwr/Sftwr Syst	4

Take 7 credits minimum from the following:

EELE 367—Logic Design	4
EELE 465—Microcontroller Applications	4
EELE 466—Computational Comp Arch	4
EELE 475—Hrdwr & Sftwr Eng for Emb Sys	3

Students must receive a grade of "C-" or better in all courses used to fulfill the minor.

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